

TRANSFORMING PAYMENTS: UNDERSTANDING THE CONSUMER ROLE

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PeachPay: New Data to Drive New Strategies

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December 8, 2016



Disclaimers

- The views expressed in this presentation are those of the author and do not necessarily represent the views of the Federal Reserve Bank of Boston or the Federal Reserve System.
- Results from the 2012 and 2015 Diary of Consumer Payment Choice (DCPC) and the 2015 Survey of Consumer Payment Choice (SCPC) are preliminary and subject to change.

The Consumer Role

- Boston Fed consumer payments data looks at consumer role (demand) in payment choice
- Consumers have lots of payment choices
- With so many options, how do consumers decide?
- How consumers pay

BOSTON FED CONSUMER PAYMENTS DATA

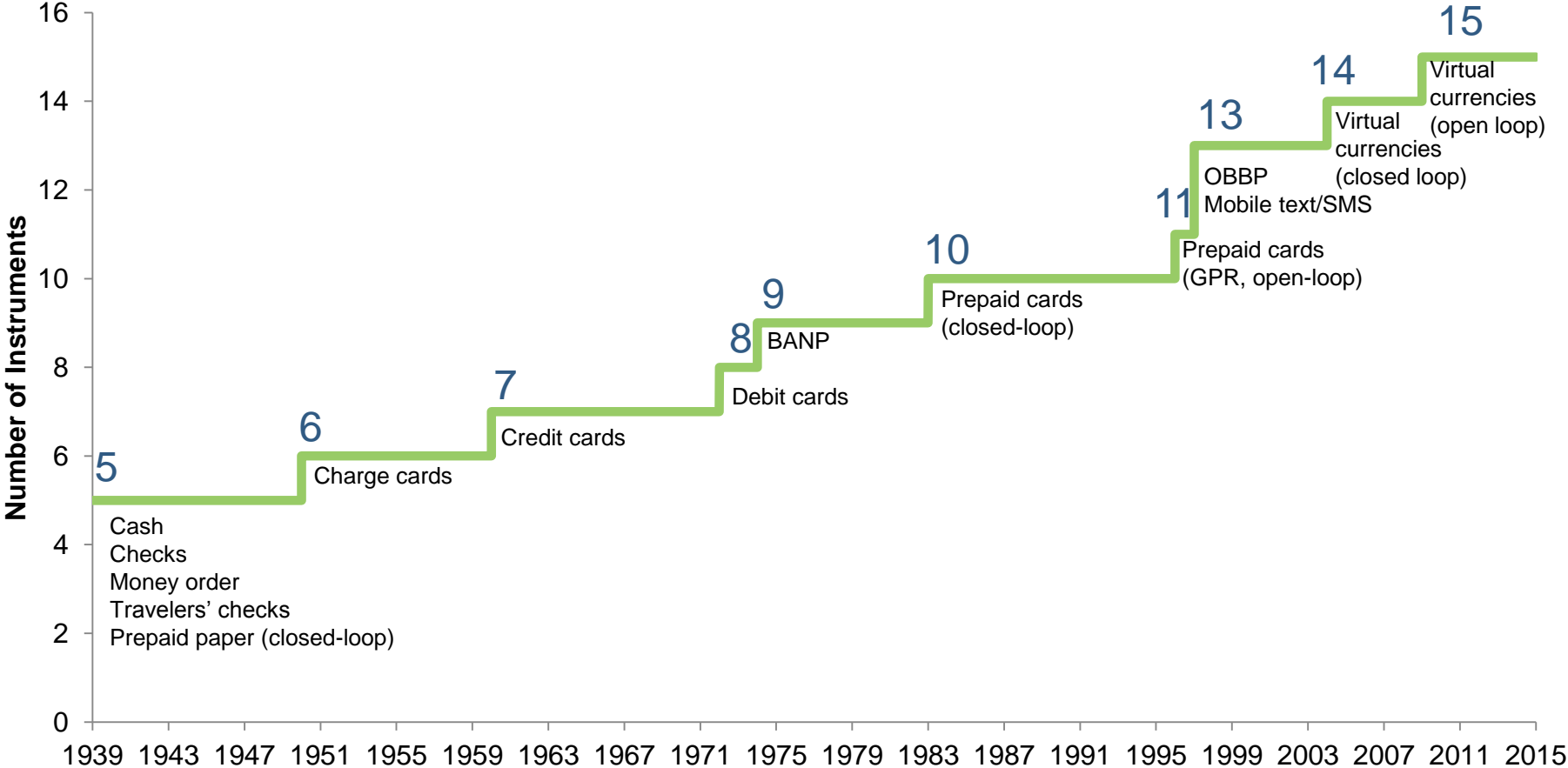
Nationally representative samples

Measuring consumers' payment choices with nationally representative samples

- **Survey of Consumer Payment Choice, SCPC** (2008-2016)
 - Annual estimates of consumers' *recall* of a “typical month”
 - *Adoption of deposit accounts and payment instruments*
 - *Use (# per month) of payment instruments by seven payment types*
- **Diary of Consumer Payment Choice, DCPC** (2012, 2015-2016)
 - Collaboration with the Federal Reserve Bank of San Francisco Cash Product Office and Federal Reserve Bank of Richmond
 - Daily *recording* of estimates for three days in October (usually)
 - *Use (# and \$) of payment instruments for all payment types*
 - *Types of payees and consumer expenditures*

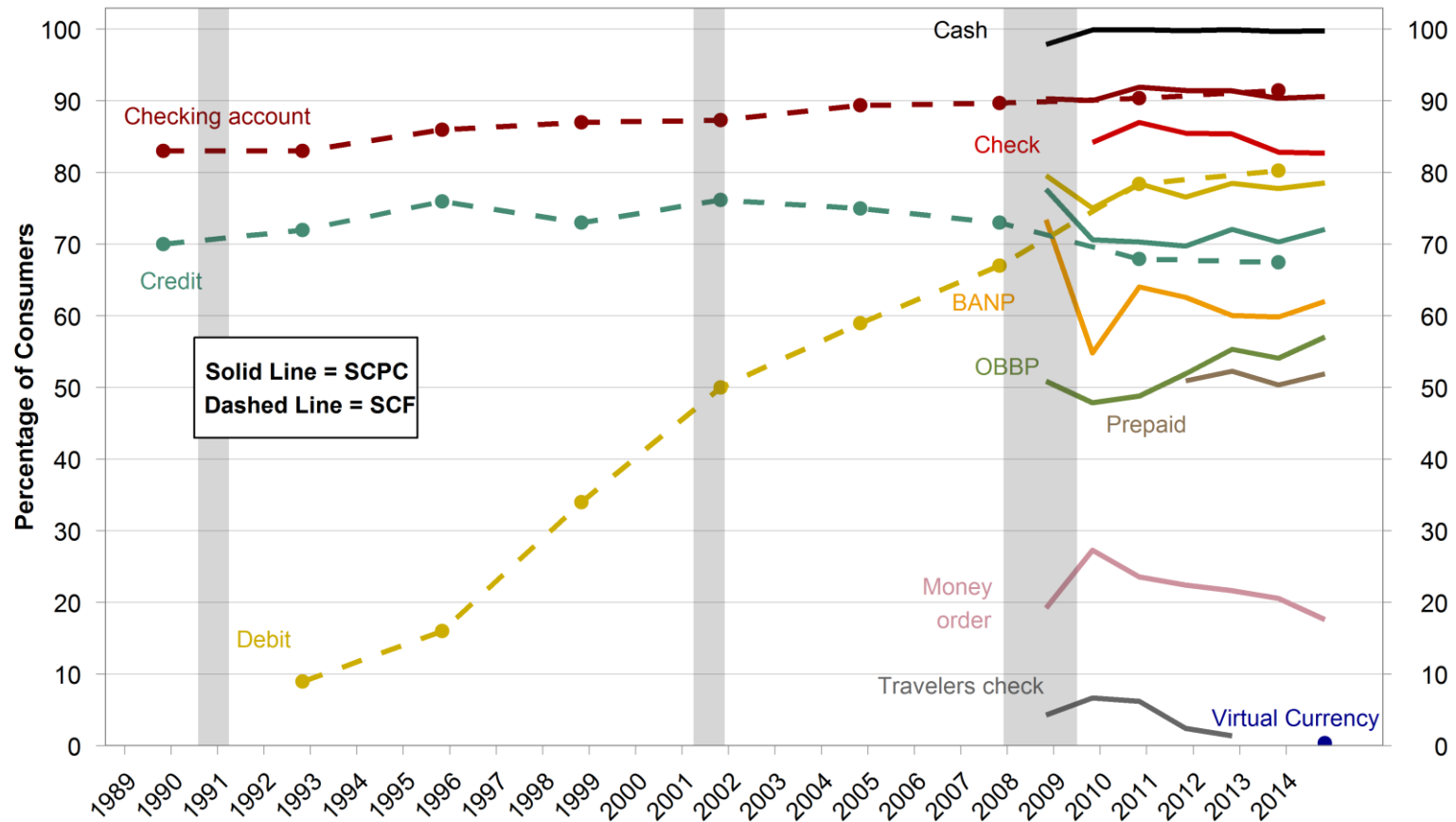
CONSUMERS HAVE LOTS
OF PAYMENT CHOICES

Consumers have more choices....



Source: Author's research.

...& adopt new without discarding old



Source: 2008-2014 Survey of Consumer Payment Choice (SCPC), 1989-2013 Survey of Consumer Finances (SCF).

Q: What is the main reason that consumers have adopted so many payment instruments?

- Consumers value and demand large variety and more choices
- No single fast, safe, and low-cost payment instrument exists that can be used everywhere
- Acceptance of payment instruments by merchants and other payees is still far from universal
- Innovation and competition produces more payment instruments in the short run
- Having many payment instruments provides financial benefits and advantages
- None of the above

WITH SO MANY OPTIONS,
HOW DO CONSUMERS
DECIDE WHAT TO USE?

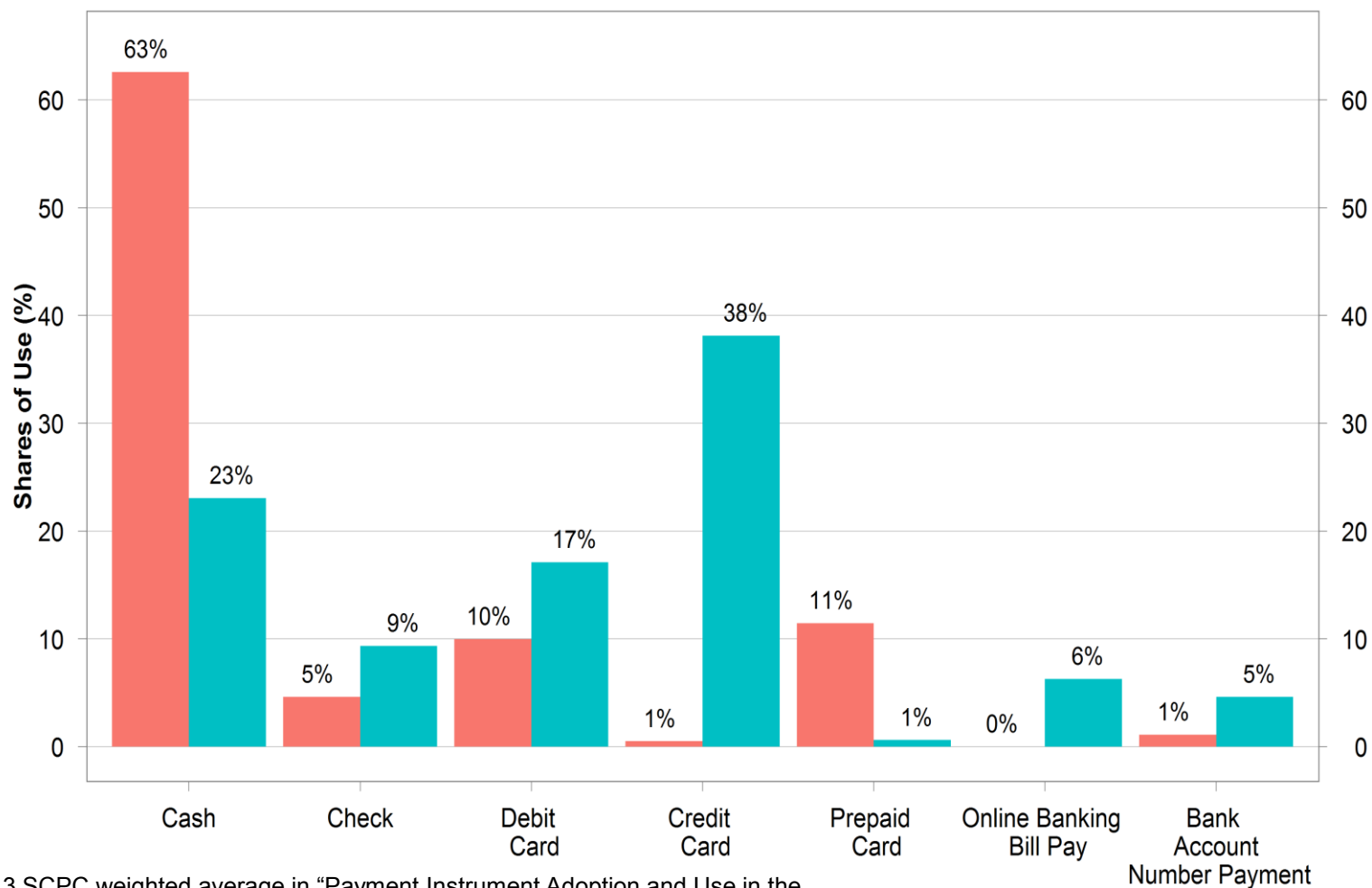
Three factors important for payment instrument choice

- Characteristics of the consumer
 - Income(individual and household)
 - Demographics
- Characteristics of the payment instrument
 - Security
 - Cost
 - Convenience
- Characteristics of the transaction
 - Dollar value
 - Type of expenditure
 - Type of merchant

#1 CONSUMER CHARACTERISTICS

Income (individual & household) and demographics (gender, age, education, race, ethnicity, labor force status)

Use varies with demographics & income



2009-2013 SCPC weighted average in "Payment Instrument Adoption and Use in the United States, 2009-2013, by Consumers' Demographic Characteristics" by Sean Connolly and Joanna Stavins Federal Reserve Bank of Boston Research Data Report 15-6.

Income <\$25K, Education Less than High School, Black
Income >\$100K, Post-Graduate Education, White

#2 PAYMENT INSTRUMENT CHARACTERISTICS

Acceptance for payment, acquisition & setup, convenience, cost, payment records, speed, security

Q: Which payment characteristic is most important when you decide which payment method to use?

- Acceptance for payment
- Getting and setting up
- Cost
- Convenience
- Payment records
- Security
- Speed

Increased security would have an effect—albeit small—on use

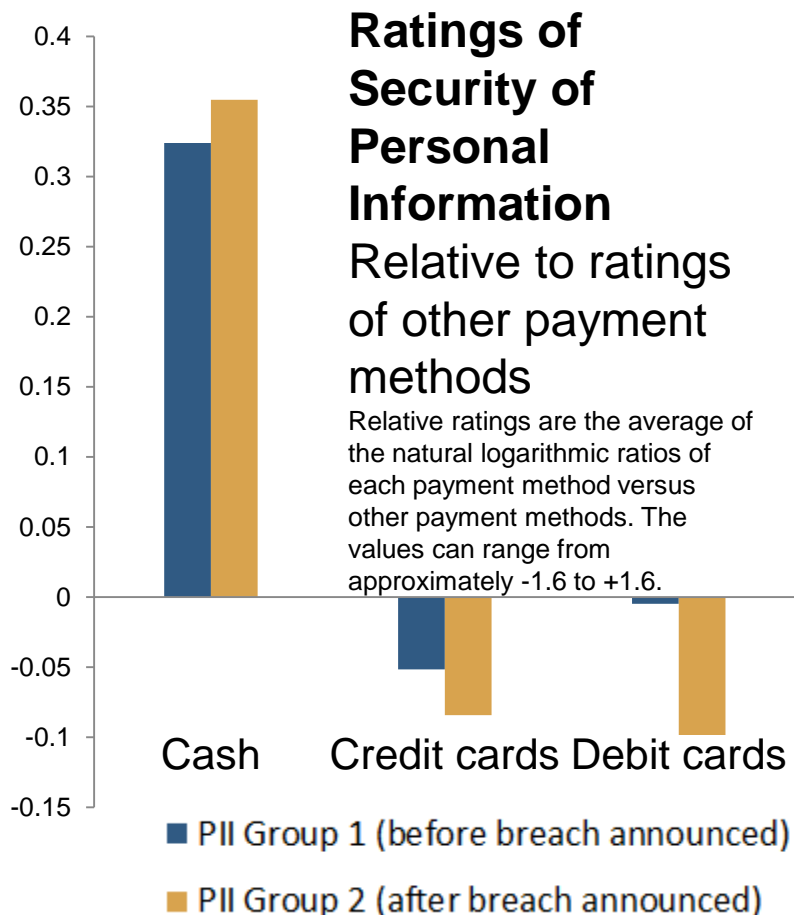
Higher debit and credit security → higher use, BUT: small economic effect

Effect on Use	Debit	Credit	Prepaid
Cost	*	***	
Convenience		***	***
Records			*
Security of financial wealth	***	***	**
Security of personal information			*
Security of transaction information		*	

*Source: 2013 Survey of Consumer Payment Choice.
Cited in "How Do Speed and Security Influence Consumers'
Payment Behavior?" by Scott Schuh and Joanna Stavins
forthcoming in *Contemporary Economic Policy*.*

Debit ratings lower immediately after Target breach

Consumers answering after the breach assess debit card security more poorly



No long-run effect found

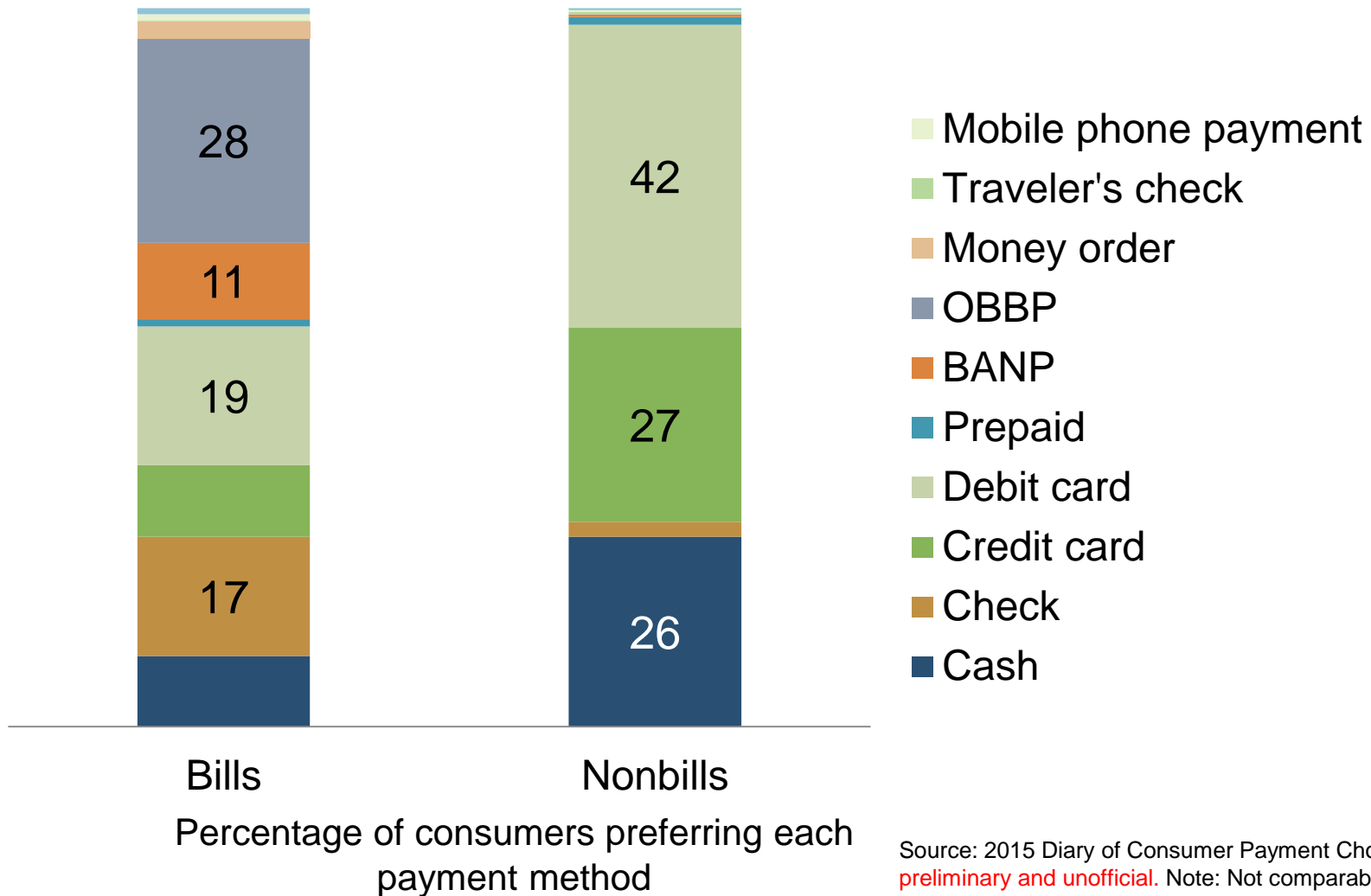
- No evidence that the breach announcement caused any long-term effects on changes in payment behavior

Source: 2013 & 2014 Survey of Consumer Payment Choice.
 Cited in "Did the Target Data Breach Change Consumer Assessments of Payment Card Security?" by Claire Greene and Joanna Stavins. Federal Reserve Bank of Boston Research Data Report 16-1.

#3 TRANSACTION CHARACTERISTICS

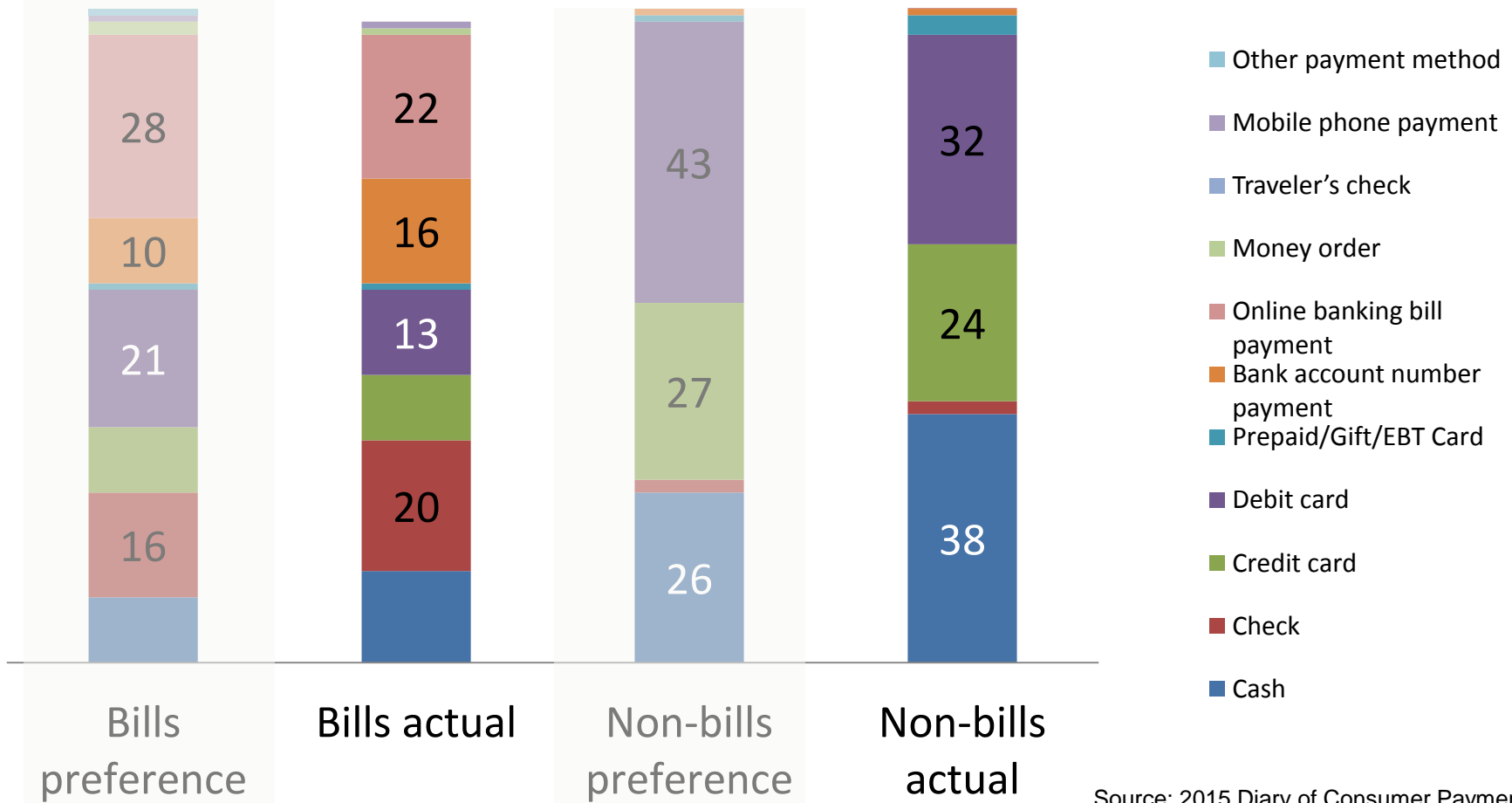
Transaction type (bills, nonbills, P2P), dollar value, merchant type

Consumers prefer different payment instruments for bills and non-bills



Source: 2015 Diary of Consumer Payment Choice, preliminary and unofficial. Note: Not comparable to 2012 DCPC due to questionnaire and sample changes.

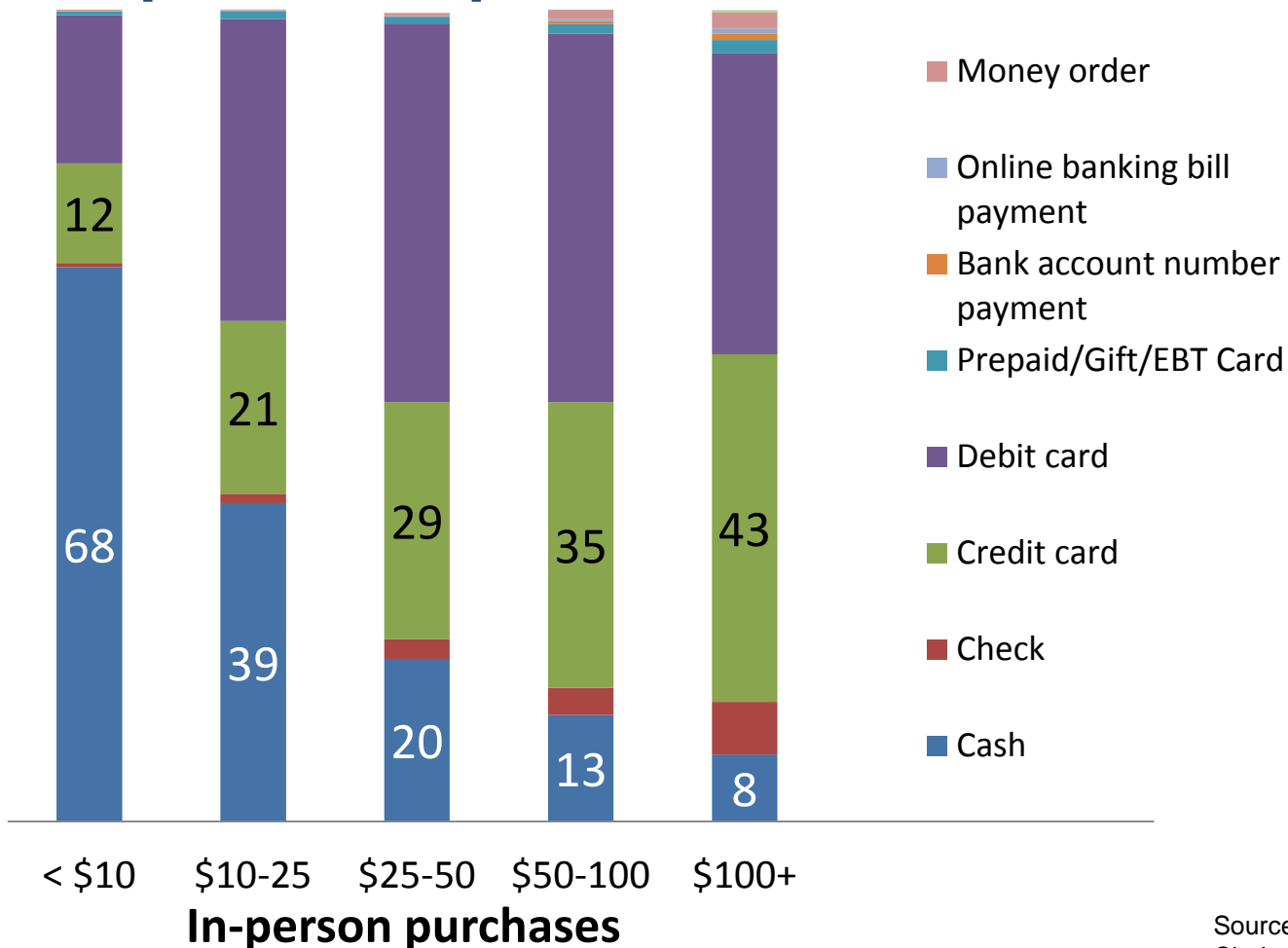
Consumers tend to use the payment instruments they prefer most of the time



Percentage of consumers preferring each payment method and actual shares of payments (by number)

Source: 2015 Diary of Consumer Payment Choice, 10/16/2015-12/15/2016 preliminary and unofficial. Note: Not comparable to 2012 DCPC due to questionnaire and sample changes.

Cash is preferred for low-value in-person purchases



Percentage of consumers preferring each payment method

Source: 2015 Diary of Consumer Payment Choice, **preliminary and unofficial**. Note: Not comparable to 2012 DCPC due to questionnaire and sample changes.

\$ value of transaction can cause consumers to switch from preference

Price incentives rarely cause switch to a non-preferred method

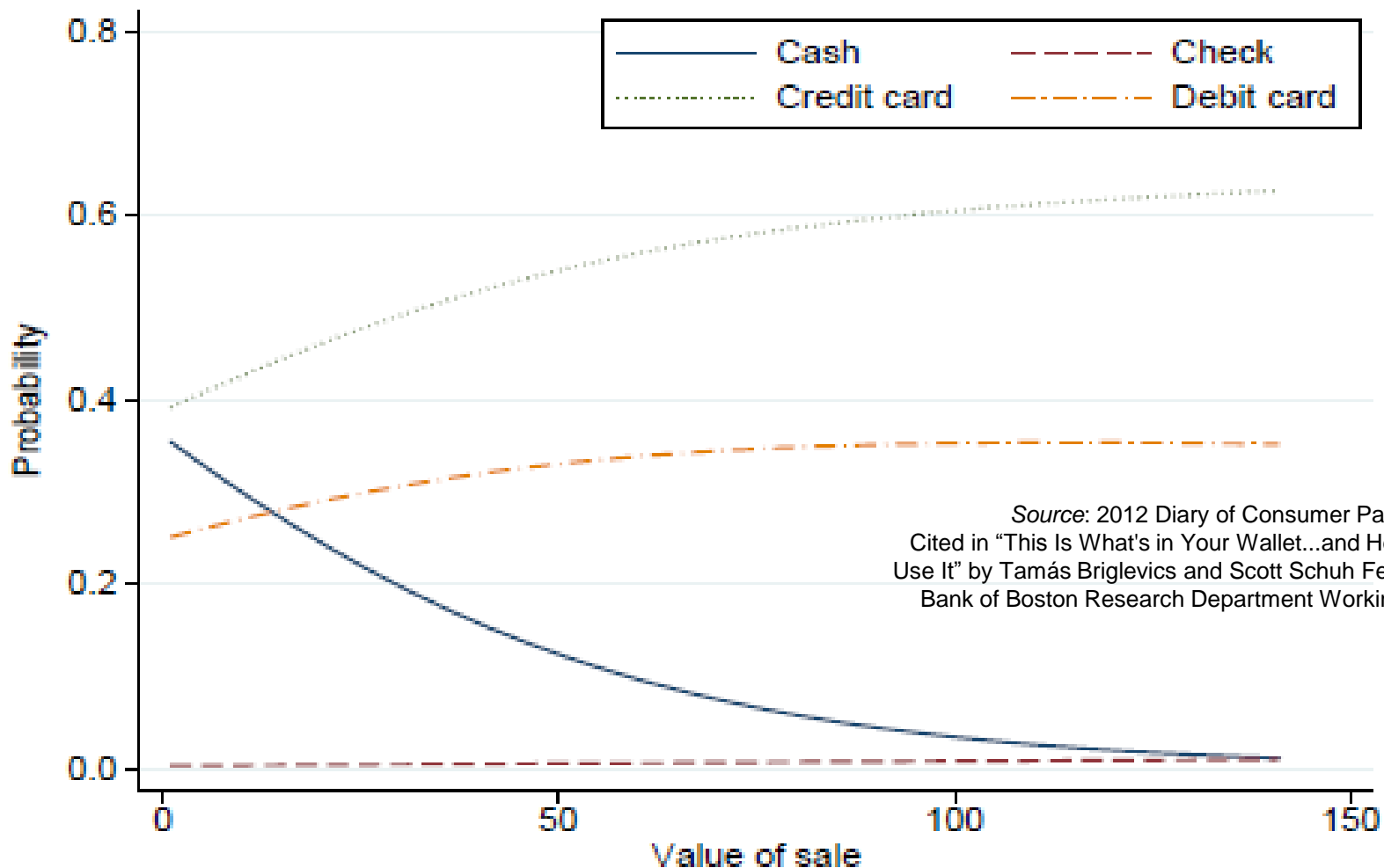
- Most transactions conducted with preferred method
- Reasons to switch
 - Cards preferred: transaction size
 - Cash preferred: not enough cash on hand

Preferences and reason for deviation for non-bill transactions

Payment Instrument	Cash	Debit	Credit
% who prefer PI	21.7%	45.8%	29.2%
% who used preferred PI	65.4%	57.9%	59.8%
Top reasons for deviating			
Transaction size	17.1%	30.1%	32.4%
PI not on hand	31.4%	4.3%	4.5%

Source: 2015 Diary of Consumer Payment Choice. Non-bill transactions only. Cited in "Payment Discounts and Surcharges: Role of Consumer Preferences" by Joanna Stavins and Huijia Wu. Unpublished Federal Reserve Bank of Boston working paper.

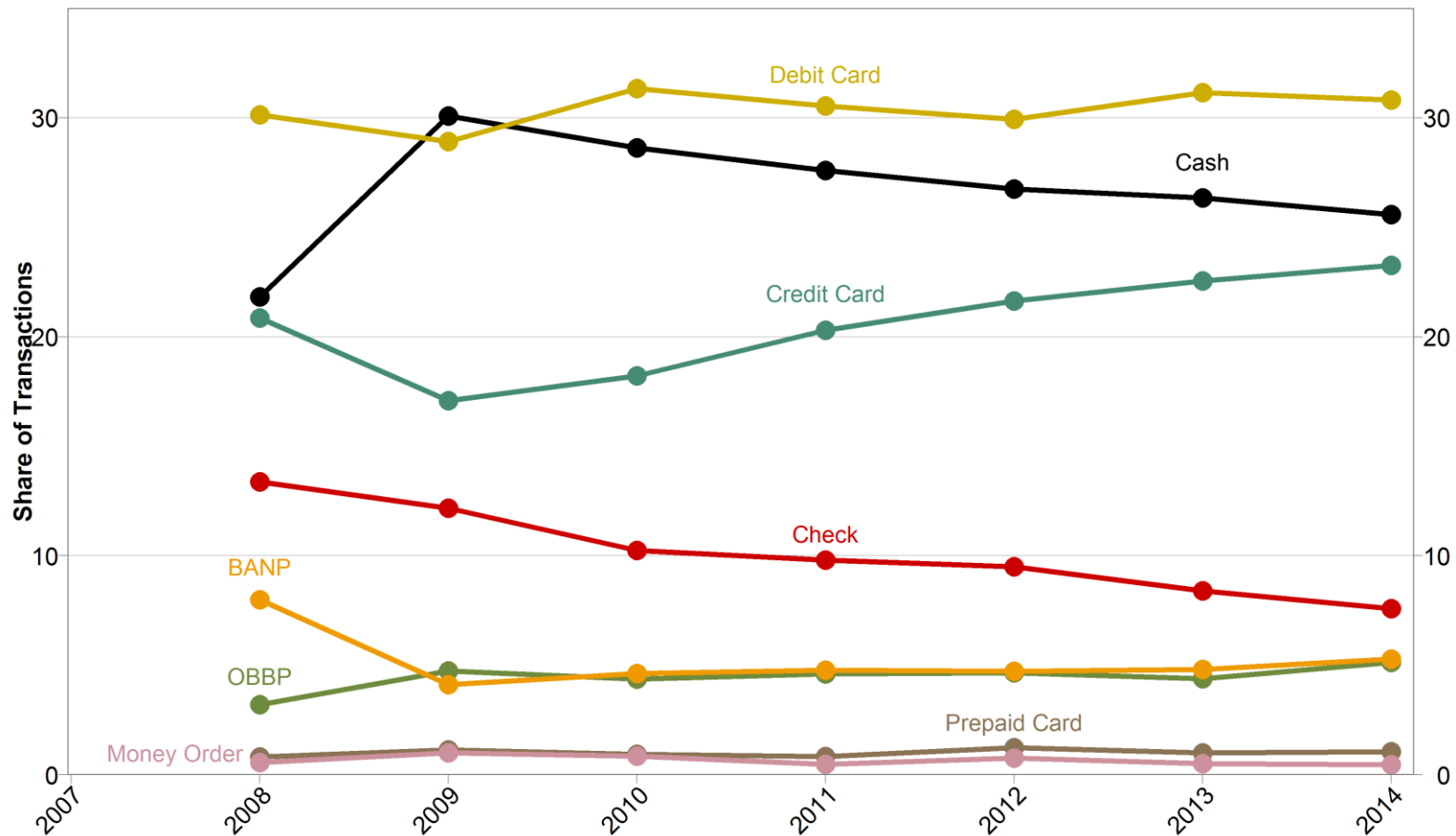
Probability of using cash declines as \$ value of shopping basket increases



Source: 2012 Diary of Consumer Payment Choice.
Cited in "This Is What's in Your Wallet...and Here's How You Use It" by Tamás Briglevics and Scott Schuh Federal Reserve Bank of Boston Research Department Working Paper 14-5.

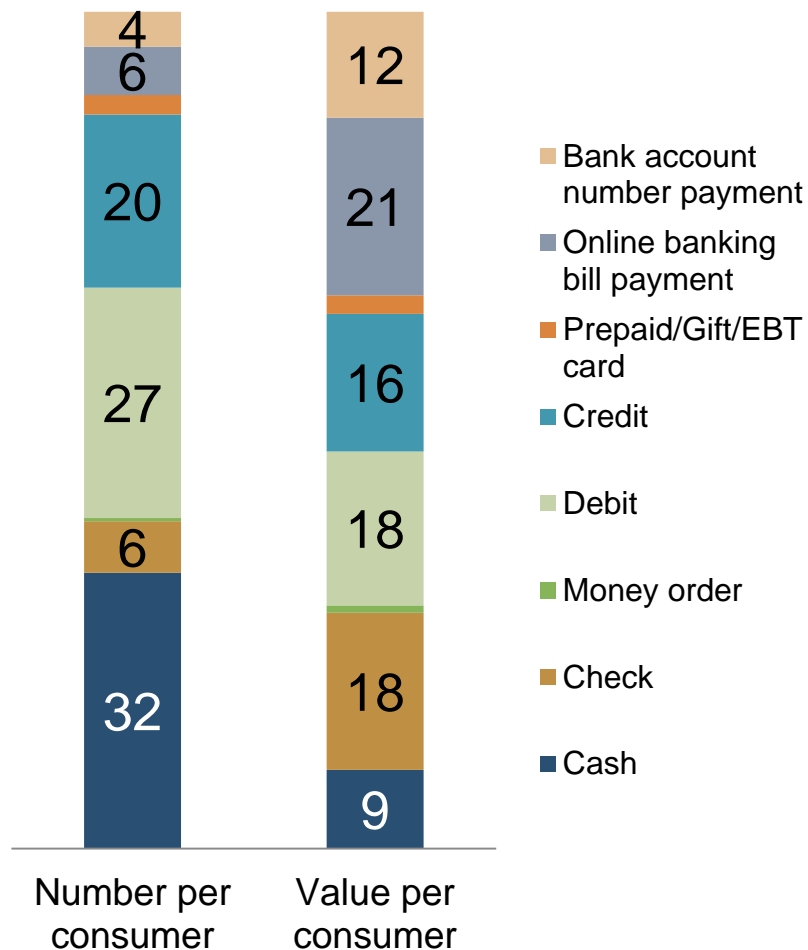
HOW CONSUMERS PAY

Consumers use debit, cash & credit most: shares of all transactions



Source: 2008–2014 Survey of Consumer Payment Choice;

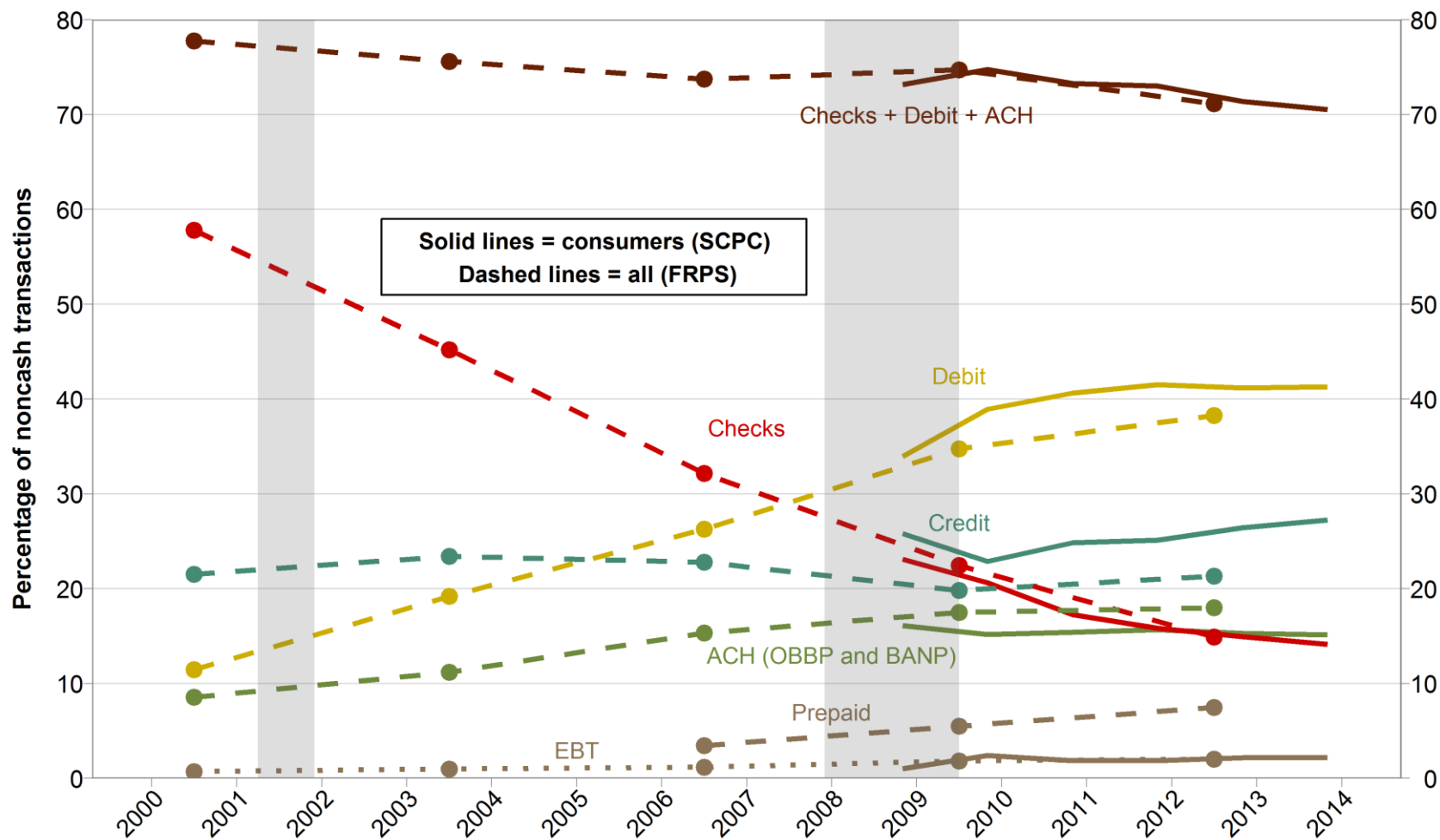
New diary data: credit, debit, cash continue to predominate by number



- By number, most transactions are cash: 32%
- By value, check, debit, & credit are about equal
- By value, one-third are electronic payments from bank account

Shares of transactions

Noncash spending continues shift from checks to debit and ACH



Sources: 2009–2014 Survey of Consumer Payment Choice; 2000–2012 Federal Reserve Payments Study, 2000–2012 data (reported 2001–2013).

Q: In the past 12 months, have you used cash to make a payment, even once?

- Yes
- No

The Consumer Role

- Technology changes quickly; people may not
 - Assessments & preferences are sticky
- 3 aspects influence choice
 - Consumer characteristics
 - Payment instrument characteristics
 - Transaction characteristics

Using the data

- Reports, data tables, raw data for download
 - <https://www.bostonfed.org/payment-studies-and-strategies.aspx>

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